

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

Claims 4, 5 and 7 are currently being cancelled.

Claims 1-3, 6 and 8 are currently being amended. Support for the amendments made to the claims may be found in Figures 4-6 of the drawings, and on page 1, lines 17-24 and page 5, lines 16-21 of the specification (e.g., see description of the stencil mask).

Claims 9 and 10 are currently being added.

This amendment and reply adds, cancels and amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After adding, canceling and amending the claims as set forth above, claims 1-3, 6 and 8-10 are now pending in this application.

Claim Rejections – Prior Art:

In the Office Action, claims 1-8 were rejected under 35 U.S.C. § 102(b) as being anticipated by JP 1181420. This rejection is traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

An electron beam exposure apparatus and method according to the presently claimed invention make it possible to expose an island-like pattern on a stencil mask onto an irradiation-target substrate or a semiconductor wafer by one-time exposure. Specifically, the present invention points out a problem which takes place on exposing an island-like pattern of a stencil mask onto an irradiation-target substrate. In order to solve the above-mentioned problem, the present invention provides for a vertical arrangement of an irradiation-target substrate and a stencil mask which enables to use a stencil mask which has a membrane.

In other words, the presently claimed invention recites a relationship between the vertical arrangement of the irradiation-target substrate and the stencil mask, as well as the stencil mask having an island-like pattern.

JP 1181420 discloses a proximity exposure apparatus which has a substrate holder and a mask holder, both of which are closely and vertically arranged to each other. Exposure can be made with a photo-mask and a substrate vertically held on the mask holder and the substrate holder, respectively. The proximity exposure apparatus as described in JP 1181420 is helpful to avoid deflection of the photo-mask even if the photo-mask becomes large in size and heavy in weight.

However, no disclosure is made at all in JP 1181420 about exposing, as the photo-mask, a stencil mask which has an island-like pattern, and there is no discussion made in JP 1181420 about any problem of exposing such an island-like pattern. Accordingly, JP 1181420 does not disclose or suggest exposing an island-like pattern on a stencil mask by one-time exposure.

Accordingly, presently pending independent claims 1, 3 and 8, which recite features as discussed above, are not anticipated by JP 1181420.¹

New Claims:

New claims 9 and 10 have been added to recite features described on page 5, lines 9-10 and 20-21 of the specification, whereby such features provide an additional basis of patentability for those claims, beyond the reasons given above for their base claim 1.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

¹ This reference was also of record in the counterpart Japanese patent application, whereby the presently pending claims have been amended in a manner similar to amendments made in the counterpart Japanese application, and whereby the counterpart Japanese application issued as Japanese Patent No. 4,199,618 on December 17, 2008.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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